REMARKS

In the patent application, claims 1-27 are pending. In the office action, all pending claims are rejected.

Applicant has amended claims 1 and 23.

Claim 1 has been amended to correct a typographical error.

Claim 23 has been amended to add the word "apparatus" after "A video decoding". The support can be found in Figure 3.

No new matter has been introduced.

At section 5, claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being infinite because claim 23 is an omnibus type claim.

Applicant has amended claim 23 to claim an apparatus.

At section 7, claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Chakraborty* (U.S. Patent No. 7,110,454 B1), in view of *Oh et al.* (U.S Patent No. 7,551,673 B1, hereafter referred to as *Oh*).

In rejecting claims 1-27, the Examiner states that *Chakraborty* discloses a method (Figures 2A-2B) comprising:

retrieving in a decoder information (col.6, lines 45-50) indicative of type of scene transition from an encoded video bitstream for identifying the type of scene transition (col.1, lines 55-67), wherein the encoded video bistream comprises a video sequence, the video sequence comprising at least a first scene and a second scene, the second scene comprising a scene transition from the first scene (col.7, lines 50-60), wherein the scene transition comprises a number of frames and the scene transition is one of a number of scene transition types (col.14, lines 35-50).

The Examiner admits that *Chakraborty* fails to disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the identified type of scene transition. The Examiner points to *Oh* for disclosing applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the

identified type of scene transition (col.10, lines 23-28; col.11, lines 5-10) in order to derive accurate motion vectors for error concealment (col.6, lines 58-62).

It is respectfully submitted that, in the claimed invention, the information indicative of a type of scene transition is provided in an encoded video bitstream so as to allow a decoder to retrieve the information for identifying the type of scene transition.

Chakraborty does not disclose or suggest providing such information in an encoded video bitstream. At col.6, lines 42-51, *Chakraborty* only describes the source from which the data acquisition module 13 captures or extracts video frames. In particular, the video data input to the data acquisition module 13 is either compressed or decompressed video data. Compressed data may be in an MJPEG or an MPEG data stream. According to *Chakraborty*, a metric computation 14 is used to analyze the input data and output a time series of data for each metric (col.7, line 7-10), and a scene change detector 18 is used to detect a scene change in the video data based on the times series data (col.7, lines 17-23). Based on the detected changes, the scene change detector 18 outputs a list of scenes (or shots) corresponding to the input video data in a database (col.7, lines 61-62).

Moreover, the video processing system as shown in Figure 1 of *Chakraborty* is not a decoder, and there is no information indicative of the type of scene transition in the compressed or decompressed video data. *Chakraborty* does not disclose or suggest retrieving in a decoder information indicative of a type of scene transition from an encoded video bitstream for identifying the type of scene transition.

Oh does not disclose applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition.

Oh only discloses a method and apparatus for encoding digital video according to MPEG standards using an adaptive motion estimator. In particular, the encoder derives a plurality of global motion vectors from the motion vectors of a previous picture in a sequence, and the global motion vectors are analyzed to determine motion characteristics (Abstract; Figure 1). The purpose of determining the motion characteristics is to determine the type of motion estimator to be used for subsequence pictures (Abstract; col.4, lines 49-52; col.6, lines 6-8). According to *Oh*, the global motion estimator is updated with MB

(macroblock) motion vectors from the past processed pictures by the adaptive motion estimator (col.6, lines 9-18). If the MBs belong to an I-picture, it is possible to subject those MBs to the adaptive motion estimator for generation of error concealment motion vectors such as defined in MPEG2 standard (col.6, lines 52-62). In col.10, lines 24-33, *Oh* discloses that, in the absence of scene changes, the type of motion estimation scheme selected is often suitable for pictures in the vicinity of the current picture. In that case, if FS_GMV1 is associated with a particular picture, then pictures that used global motion vectors derived from that particular picture will also use FS_GMV1 for the motion vector detection process.

Accordingly, *Oh* has nothing to do with a decoding process. *Oh* has nothing to do with applying an error concealment procedure to conceal an error in a frame belonging to the scene transition in a decoding process. *Oh* does not disclose or suggest applying an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition. *Oh* does not disclose how an error concealment procedure is carried out in a decoder.

In summary, *Chakraborty* is concerned with a method for detecting a scene change in an input video data based on metric computation and outputting a list of scenes or shots in a database. *Chakraborty* does not disclose retrieving, in a decoder, information indicative of a type of scene transition from an encoded video bitstream for identifying the type of scene transition. *Oh* is concerned with motion estimation in an encoder. *Oh* discloses that if the MBs belong to an I-picture, it is possible to subject those MBs to the adaptive motion estimator for generation of error concealment motion vectors. However, *Oh* does not disclose or suggest applying in a decoding process an error concealment procedure to conceal an error in a frame belonging to the scene transition based on the motion characteristics of the identified type of scene transition.

For the above reasons, *Chakraborty*, in view of *Oh*, fails to render independent claims 1, 14, 17, 23, 24 and 25 obvious.

As for dependent claims 2-13, 15, 16 and 18-22, they are dependent from claims 1, 14 and 17 and include further limitations. For reasons regarding claims 1, 14 and 17 above, *Chakraborty*, in view of *Oh*, also fails to renders claims 2-13, 15, 16 and 18-22 obvious.

CONCLUSION

Claims 1-27 are allowable. Early allowance of claims 1-27 is earnestly solicited.

Respectfully submitted,

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Date: March 31, 2010

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